Title: Basic Mouse Autopsy for Technicians

Objective: To implement a thorough autopsy procedure for technical staff

Risk Statement:
The following risks have been identified with this procedure and precautions advised to avoid injury/illness:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Risk</th>
<th>Risk Level</th>
<th>Precaution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling of Mice</td>
<td>Bite/scratch</td>
<td>Low</td>
<td>Effective training and precaution in handling of animals</td>
</tr>
</tbody>
</table>

PPE: The following personal protective equipment MUST be used during this procedure:

- Gown
- Gloves
- Mask

Prerequisites:
Competency in the restraint of mice
Competency in cervical dislocation
Competent in mouse identification
Competent in the observation of health of mice
Competency in organ identification and collection

Equipment Required:
Surgical scissors

1/13/2011
Curved forceps  
Paper towel  
Observation sheet  
Slides  
Cellotape  
1ml/5ml syringes  
21G needles  
10% NBF  
Virkon  
80% ethanol  
Body bags  
Gloves  
Gown  
Face mask

PROCEDURE:

1. Collect required equipment and prepare the workspace  
2. Collect the mouse, ensuring that you have identified it correctly  
3. Cull the mouse using CO2 as per AEEC004_EuthanasiaofRodents procedure  
4. If an ectoparasite infection is suspected:
   - Take a piece of cello tape and press it firmly over the perianal skin  
   - Remove the tape and place it on one half of a slide  
   - Take another piece of cello tape and with the mouse on it’s back rub the tape over the entire mouse starting at the base of the of the tail on the underside and working upwards  
   - Turn the mouse over and repeat this step  
   - Place this tape onto the other half of the slide
5. Spray the mouse with ethanol  
6. As per diagram 1.1 cut the mouse open from the abdomen all the way to the chin  
7. Cut through the attachments of the forelegs to the thoracic wall  
8. Inspect the superficial and deep cervical lymph nodes and record if any swelling or abnormalities are present  
9. Pick up the diaphragm at the base and make a small incision to open the chest cavity  
10. Cut along both edges of the rib cage gently cutting though the muscle attachments ensuring the trachea is not damaged  
11. Cut away the diaphragm and pick up the base of the rib cage, pulling it gently towards the chin  
12. Cut way the remaining muscle attachments to expose the trachea  
13. Inspect the organs within the chest cavity and record any abnormalities
   - Inspect each lung for gross lesions, discolouration and size  
   - Inspect the heart and thymus for abnormalities  
14. If the lungs or heart show any signs of abnormality they may be required to be sent off for further testing  
15. The lungs need to be perfused before shipment to allow for a thorough examination on arrival at health screening facility (See diagrams 1.2-1.5)
Standard Operating Procedure
AEEC005 – Autopsy of Mice

- Insert the needle (attached to syringe filled with formalin) into the trachea towards the heart
- Grasp the trachea around the inserted needle with forceps to prevent the backflow of formalin
- Push the syringe plunger to inflate the lungs
- The lungs are adequately inflated when the formalin reaches the margins of all lung lobes and the lungs fill the chest cavity
- Remove the needle and grasp the trachea with forceps to keep the lumen closed
- Remove the lungs and heart by cutting the trachea and the muscle attachments
- Submerse the lungs, heart and trachea in formalin
16. Inspect organs within the abdominal cavity and record any abnormalities
17. If an infection is present both the spleen and mesenteric lymph nodes may be enlarged.
18. If the spleen, kidneys or liver show abnormalities they may need to be collected and placed in formalin for inspection
19. If pin worm is suspected follow the ABS Gut Wash Procedure
VERSION HISTORY:

<table>
<thead>
<tr>
<th>Version Number</th>
<th>Date Initiated</th>
<th>Changes Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.0</td>
<td>January 2010</td>
<td></td>
</tr>
</tbody>
</table>

SUMMARY:
- A thorough Post Mortem should be completed in any unexpected death
- Unusual findings must be recorded and where possible, organs kept for further analysis
- Appropriate safety must be shown during the use of needles and scissors.